

A GRANDFATHER'S STORY

From \$143 to a Competence in Three Years.

F. J. Chamberlain tells a story of his efforts before moving to Canada in 1916 to make a living. It was hard work. He had so many "ups and downs" that he became dispirited before he learned of the success of former neighbors of his who were doing well up in Canada. He sold his holdings for a song, and had a sale of what effects he had. When he straightened up with his storekeeper and paid a few debts he found that he had \$143 in cash, a good constitution, a wife and five children. He had saved some few things from the sale. These he put into a car with the effects of a couple of others, who like him were going to Canada. He went into the Gem Colony in Alberta in 1916, bought a piece of land and commenced operations. The money he placed in the bank, and started one of his boys out to earn enough money to supply the table. The older boy used his wages to break up the sod on the 160 acres. But let Mr. Chamberlain tell the rest of the story, which he has signed over his own signature. He says: "I rented 70 acres and hired it put into wheat, thrashed 23 wagon loads for my share. We lived in the granary two years.

"The first of December, 1918, I laid the concrete foundation for a twenty-five hundred dollar house and completed it the last of January. I have nine head of horses and mules, five head of cattle, fifteen pieces of machinery, seven outbuildings paid for and half interest in a thrashing machine. This is an old grandfather's story, as my son-in-law came with four children from Idaho last March and bought 320 acres C. P. R. irrigated land and we helped him develop 200 acres of it. They can't say around here, 'everybody works but father.'"

Increased His Wealth Six Hundred Fold.

There are more stories of success in Western Canada. There's that of Allan Nicholson of Hazelbridge, Manitoba. In speaking of it he says: "I shall never regret coming to Manitoba. I came here seventeen years ago. I think it was in the spring of 1903. My old home was at Le Mars, Plymouth county, Washington township, Iowa, where I had been farming for a good many years. I had a farm of 248 acres, of which I owned 80 acres and rented 160. When I left in 1903 I sold my equity in the farm for \$75.00 per acre. The nearest station to my place was Dalton, and my old neighbors there will remember me very well. "When I came to Canada I rented three-quarters of a section at South Plympton, near Springfield, Manitoba. After a year or two's experience at renting I bought my present farm of 320 acres, and am now engaged in mixed farming. I have always had good crops since I came here, and some of them have been bumper crops.

"If I went back to the United States today I could take back \$5.00 or \$6.00 to every \$1.00 that I brought into the country. My land today is worth from \$75.00 to \$85.00 an acre, and in addition to my grain growing I have made a specialty of high-grade Percheron horses, purebred Shorthorn cattle and purebred Berkshire hogs. I have had uniform good luck in connection with my stock, and today I would not sell my farm for a cent less than \$30,000.

"The older settlers of Le Mar, Iowa, will remember me very well. I was greatly impressed with the country when I made my first visit here in 1903, and that impression has been strengthened all the time I have been here.

"The climate agrees with us all. Before I came here my doctor's bills were something awful. I had no sooner got one paid than I was due for another one. Since we have been in Manitoba \$50.00 would pay all our doctor's bills for the last seventeen years.

"I think I am doing my old friends a kindness in letting them know how well I have done since I came here. This is certainly a country of opportunities. I have had no more good luck than falls to the fortune of any ordinary person, and I am satisfied I could never have done as well had I remained in the old home. I shall be pleased at any time to give information to old friends who care to write me about my experiences in this country."

W. S. Nethery, Canadian government agent, Room 82, Interurban Station Bldg., Columbus, O., can give information concerning all districts in Western Canada.—Advertisement.

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SMUTS ARE MOST DESTRUCTIVE TO CEREAL CROPS IN ALL GRAIN-GROWING SECTIONS

(Prepared by the United States Department of Agriculture.)

Smuts caused an estimated loss in 1918 of 25,000,000 bushels of wheat, 110,000,000 bushels of oats, and 6,000,000 bushels of barley in the United States. These diseases, which are among the most destructive that attack cereal crops, occur to a greater or less extent in all the grain-growing sections of the country.

There are two kinds of wheat smut, the loose smut and the covered smut; the latter is also called bunt or stinking smut.

Loose smut is found in practically every wheat field. It is most serious in the southern winter wheat section—southern Missouri, southern Illinois, southern Indiana, southern Ohio, southern Pennsylvania, Maryland, Virginia, Kentucky and Tennessee. Throughout this general area the annual losses range from 3 to 5 per cent. In many individual fields losses of 15 to 20 per cent are known. Outside of this general region the damage due to loose smut ranges from about 1 to 2 per cent.

Bunt, or stinking smut, also is found in the different wheat-growing areas of the country. Commonly, the damage done by this smut is from 1 to 5 per cent of the crop. Frequently, however, fields show losses which range from from 20 to 40 per cent. Several fields have been destroyed in which the damage amounted to 50 or even 80 per cent.

How to Distinguish Smuts.

Loose smut shows up most strikingly at the time when the wheat comes into head. The diseased plant is found to have the kernels and chaff replaced by a black, sooty mass of dustlike particles. These dust-like particles, the spores of the smut fungus, begin to blow from the diseased head soon after the latter emerges from the boot. These spores are carried by the wind to neighboring sound heads which are



Healthy Wheat Head and Smut Laden Head.

in bloom at the time; they lodge between the glumes or chaff, where they start growth immediately and penetrate the newly forming kernels. When these infected kernels are ripe they can not be distinguished from sound kernels, but they nevertheless contain the smut fungus. When an infected seed is planted and germinates the smut plant within it also begins to grow and develops within the growing plant; when the plant begins to form the head the developing tissues of the grain and chaff are destroyed and the smut fungus produces its spores.

Wheat heads infected with bunt are readily distinguished a short time before the wheat is ripe, although the trained observer can detect the presence of the disease several days before. The heads of smutted plants stand more erect on account of their lighter weight. The chaff is spread apart by the swelling of the enlarged

false kernels or smut balls, which give the heads a dark color. These smut balls contain a greasy, ill-smelling mass of smut spores.

In thrashing operations these smut balls are knocked out and the head more or less broken apart and the smut spores scattered over the sound kernels; such grain has a darker color and a disagreeable odor due to the presence of the smut spores. Smutty wheat is docked more or less by the miller.

When smutty seed is sown in the soil the stinking smut spores germinate simultaneously with the wheat kernels, and the smut fungus penetrates the young wheat plant. It continues to grow within the tissues of the wheat plant and forms its spores in the place where the healthy kernels should be developed.

Control of Loose Smut.

Loose smut is very difficult to control because the fungus is inside of the seed which is sown and hence can not be reached by ordinary chemicals without killing the wheat embryo. The disease, however, can be controlled by the so-called hot-water treatment. The method involves soaking the seed grain in cold water for 4 to 6 hours. It is then dipped in hot water at a temperature of 129 degrees Fahrenheit for 10 minutes; the seed should then be spread out to dry.

It is very important that the water be kept at the exact temperature and the seed immersed for just the correct period of time. If the water is allowed to get one or two degrees above the temperature indicated, or the time prolonged beyond the 10 minutes, considerable injury to the grain will result.

The hot-water treatment, on account of its difficulties, is not practicable on the average farm. One must have an accurate thermometer and facilities for keeping the temperature of the water constant. This can be done quite easily where steam is available.

Some progress is being made in developing central treating plants where adequate facilities are available for carrying out the treatment. The farmer brings his grain to this plant and an expert looks after its treatment. In those sections where loose smut is particularly destructive, it would seem advisable for the county agents to develop the central treating plant wherever possible.

The Control of Bunt.

Bunt, or stinking smut, is readily controlled by the use of formaldehyde. A simple procedure is to place 1 pint or 1 pound of commercial formaldehyde in 40 gallons of water. The seed to be treated should be freed as much as possible from smut balls and other foreign matter, and should then be dipped in the formaldehyde solution and kept there about 10 minutes. During this period the sack should be raised and lowered so as to stir up the grain and get it thoroughly in contact with the solution. After treatment the grain should be spread out to dry and then sown as soon as possible. One pint of formaldehyde solution, dissolved in 40 gallons of water, is sufficient to treat about 40 bushels of seed grain.

Another method of applying the solution is to spread the grain to be treated on a clean floor, and by means of a sprinkling can sprinkle the solution over the grain. The grain should be shoveled over in order to get the solution well in contact with the grain. The solution should be applied at the rate of about one gallon to one bushel of seed grain. The grain should be piled up and covered with sacks or canvas and left for two or three hours. It should then be spread out to dry and sown as soon as possible.

After treating the grain, great care must be taken not to place it on a floor or in sacks which are contaminated with the bunt spores, or to sow it in a drill which is contaminated.

POULTRY PRODUCES PROFITS

Once Looked Upon as Side-Line for Women Folks Now Important Source of Income.

A number of years ago poultry was looked upon as a side line, one where the good wife could pick up enough money to buy Christmas presents, birthday gifts, etc. However, this state of affairs has greatly changed and on many farms one of the real important incomes comes from eggs and poultry.

RATION FOR GROWING HEIFER

Mixture of Ground Corn, Oats and Barley, With Cottonseed Added Is Excellent Feed.

A good ration for growing young heifers would be a mixture of about equal parts of ground corn, oats and barley, with about one pound per head per day of cottonseed meal and oilmeal added, and all the clover hay they want. This should bring the heifers along in fine shape.

REJUVENATE OLD VINEYARDS

Demand for Grapes as Fruit and for Grape Juice Is Greater Than Ever Before.

That it will be profitable to rejuvenate many of the old vineyards is pointed out by R. B. Cruickshank, secretary of the Ohio horticultural society. The demand for grapes as a fruit and for grape juice is greater than ever before, despite the fact that vineyardists had feared that prohibition would ruin their business.

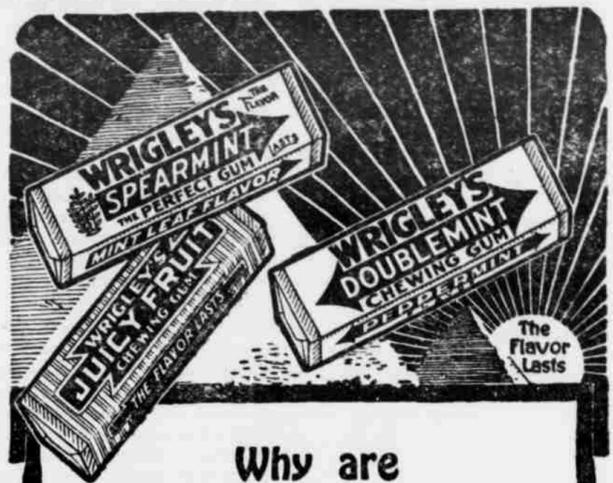
Nurseries at present are reported to be unable to supply the demand for grapevines and the future of the business seems to be guaranteed.

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